

**What Is Claimed Is:**

1           1. A method of processing phone dialing for a dial device,  
2     comprising the steps of:

3                 checking whether any dial key signal of the dial  
4     device is inputted;

5                 sequentially storing a plurality of first values  
6     corresponding to a plurality of first dial key signals in a first  
7     memory and sequentially storing a label value in a second memory  
8     when any dial key signal of the dial device is inputted and the  
9     dial device is not connected; and

10                sequentially storing a plurality of second values  
11     corresponding to a plurality of second dial key signals in the  
12     first memory and sequentially storing a time value in the second  
13     memory when any dial key signal of the dial device is inputted  
14     and the dial device is connected.

1           2. The method as claimed in claim 1, further comprising a  
2     step of:

3                 increasing an index value and storing the index value  
4     in a third memory when the dial key signal of the dial device  
5     is inputted.

1           3. The method as claimed in claim 1, wherein the label value  
2     is "0".

1           4. The method as claimed in claim 1, wherein the time value  
2     denotes a time interval between the first dial key signals and  
3     the second dial key signals.

1           5. The method as claimed in claim 1, further comprising the  
2 steps of:

3           storing data stored in the first memory and said  
4 second memory to a specified location of a fourth memory  
5 corresponding to a dial record; and

6           retrieving the data stored in the specified location  
7 of the fourth memory back to the first memory and the second  
8 memory when the dial record is selected.

1           6. The method as claimed in claim 1, wherein the dial device  
2 is a phone and the dial key signal is inputted by pressing a  
3 corresponding dial key of the phone.

1           7. The method as claimed in claim 1, wherein the dial device  
2 is a modem.

1           8. The method as recited in claim 1, further comprising the  
2 steps of:

3           checking whether a redial key signal of the dial  
4 device is inputted; and

5           sequentially sending the first dial key signals  
6 corresponding to the first values and the second dial key signals  
7 corresponding to the second values for dialing when the redial  
8 key signal is inputted;

9           wherein the first dial key signals are not delayed in  
10 being sent and the second dial key signals are delayed to be sent  
11 for a time interval defined by the time value stored in the second  
12 memory.

1           9. A method of processing phone dialing for a dial device,  
2 comprising the steps of:

3                 checking whether any dial key signal of the dial  
4 device is inputted; and

5                 sequentially storing a plurality of values  
6 corresponding to a plurality of dial key signals in a first  
7 memory and storing a plurality of time values in a second memory  
8 when any dial key signal of the dial device is inputted.

1           10. The method as claimed in claim 9, further comprising  
2 a step of:

3                 increasing an index value and storing the index value  
4 in a third memory when the dial key signal of the dial device  
5 is inputted.

1           11. The method as claimed in claim 9, wherein each time  
2 value denotes a time interval between the corresponding dial key  
3 signal and a previously inputted dial key signal.

1           12. The method as claimed in claim 10, further comprising  
2 the steps of:

3                 storing data stored in the first memory and the second  
4 memory to a specified location of a fourth memory corresponding  
5 to a dial record; and

6                 retrieving the data from the specified location of the  
7 fourth memory back to the first memory and the second memory when  
8 the dial record is selected.

1           13. The method as claimed in claim 9, wherein the dial  
2 device is a phone and the dial key signal is inputted by pressing  
3 a corresponding dial key of the phone.

1           14. The method as claimed in claim 9, wherein the dial  
2 device is a modem.

1           15. The method as claim in claim 9, further comprising the  
2 steps of:

3                 checking whether a redial key signal of the dial  
4 device is inputted; and

5                 sequentially sending the dial key signals  
6 corresponding to the values in the first memory for dialing when  
7 the redial key signal of the dial device is inputted;

8                 wherein the dial key signals are respectively delayed  
9 to be sent in response to the time values stored in the second  
10 memory.

1           16. A method of processing phone redialing for a dial  
2 device, comprising the steps of:

3                 providing a first memory that stores a plurality of  
4 values corresponding to a plurality of dial key signals of the  
5 dial device;

6                 providing a second memory that stores a plurality of  
7 time values corresponding to a first part of the values in the  
8 first memory;

9                 checking whether a redial key signal of the dial  
10 device is inputted; and

11 sequentially sending the dial key signals  
12 corresponding to the values stored in the first memory for  
13 dialing when the redial key signal is inputted;

14 wherein the dial key signals corresponding to the  
15 first part of the values stored in the first memory are delayed  
16 to be sent in response to the time values stored in the second  
17 memory.

1 17. The method as claimed in claim 16,

2 wherein the second memory stores a plurality of label  
3 values corresponding to a second part of the values stored in  
4 the first memory;

5 wherein the dial key signals corresponding to the  
6 second part of the values stored in the first memory are not  
7 delayed in being sent when the label values corresponding to the  
8 second part of the values are in the second memory.

1 18. The method as claimed in claim 17, wherein said label  
2 values are zero.

1 19. The method as claimed in claim 16, wherein the dial  
2 device is a phone and the redial key signal is inputted by  
3 pressing a corresponding redial key of the phone.

1 20. The method as claimed in claim 16, wherein the dial  
2 device is a modem.

1 21. A dial device comprising:

2 a dial interface for receiving dial key signals;

3           a first memory;  
4           a second memory; and  
5           a processing unit, coupled to the dial interface, the  
6 first memory and the second memory, for sequentially storing  
7 values corresponding to the received dial key signals in the  
8 first memory and storing at least one time value corresponding  
9 to the received dial key signals in the second memory.

1           22. The dial device as claimed in claim 21, wherein each  
2 time value denotes a time interval between the corresponding  
3 dial key signal and a previously received dial key signal.

1           23. The dial device as claimed in claim 21, wherein the  
2 processing unit stores said at least one time value  
3 corresponding to the dial key signals inputted after the  
4 connection of the dial device to the second memory.

1           24. The dial device as claimed in claim 21, wherein said  
2 processing unit sequentially stores label values corresponding  
3 to the dial key signals inputted before the connection of the  
4 dial device to the second memory.

1           25. The dial device as claimed in claim 24, wherein the dial  
2 interface further receives a redial key signal;  
3           wherein the dial key signals corresponding to the  
4 values in the first memory are sequentially sent for dialing when  
5 the redial key signal is received; and

6            wherein the dial key signals are respectively delayed  
7    to be sent for a plurality of time intervals in response to the  
8    time values in the second memory.

1            26. The dial device as claimed in claim 21, further  
2    comprising a fourth memory having at least a specified location  
3    corresponding to a dial record;

4            wherein the data of the first memory and the second  
5    memory are stored in the specified location of the fourth memory;  
6    and

7            wherein the data stored in the specified location of  
8    the fourth memory are retrieved and stored back to the first  
9    memory and the second memory when the corresponding dial record  
10   is selected.